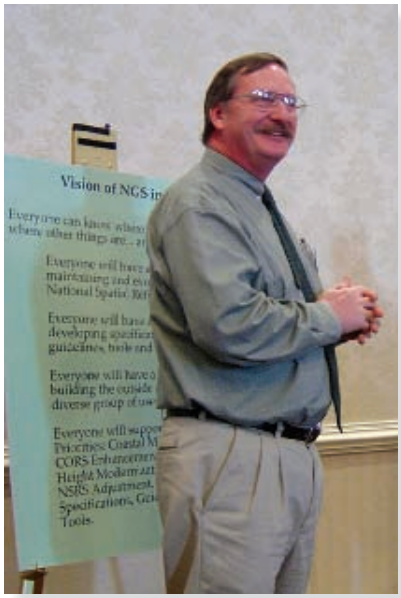
# NOAA/NGS
## Convocation 2004

# NOAA/NGS Convocation 2004




Dr. Mader, Chief, Advanced Technology Branch, Geosciences Laboratory

State Advisors attending the 2004 convocation

"Convocation" is not a word one often uses, so when I heard that NOAA's Geodetic Survey held a successful "convocation" the third week in November, my interest was thoroughly piqued. A few e-mails later, and a peek in the dictionary—which did nothing to alley my curiosity—I headed to Silver Spring, NOAA/NGS' headquarters, to find out for myself what the convocation was all about. With me was Ed McKay, who set up the interviews, and whose passions in retirement—apart from his grandkids—remain vested in NGS, AAGS, and ACSM. We talked to NGS' director, Charles Challstrom, to the senior organizer of the convocation, Dr. Gerald Mader, to David Zilkoski, currently on special assignment as Acting Technical Director, National Ocean Service, and to a number of senior scientific staff who were vital to the debate. Here are their views, comments, and impressions...

No one could tell me for sure, but office lore has it that the National Geodetic Survey's convocations go back to the times of Bill Kaula, an NGS Director with a penchant for high science and Latin vocabulary. Over the years, it has been suggested to change the name of what started out as primarily a meeting of State advertisers to something else, because of the religious overtones of the term, but ... There really is nothing religious about NGS convocations. "It's a place and time when we all meet together and renew our connections with one another—with those who are representing us in the field, the State Advisors, and with those who use our technology," according to current Director of the National Geodetic Survey, Charles Challstrom.

He sees the NGS convocation primarily as an internal meeting, focused on the "view over the horizon." A lot of brainstorming took place on "how we can use our creativity to deliver our products and services even better than we are now doing," said Challstrom. "The convocations are exciting because they allow people to share their latest and greatest achievements; both employees and management enjoy hearing about those things."

The presentations reflected the six priority areas of NOAA/NGS, providing updates on *status quo* and the foreseable future. But, the focus really was on what lies ahead for NGS.

What lies ahead are improvements under height modernization—quite a bit of attention was given to progress made on software for processing levelling observations, for instance—and, hopefully, an expansion of the height mod program into a national program.

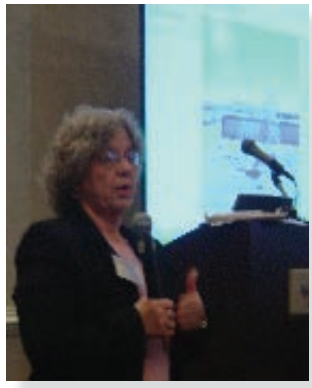
Challstrom and the manager of the program, Juliana Blackwell, were "pleased to hear words of support from some of our constituents." In talks with congressional staff some additional states have expressed interest in joining the program, and this is evidenced by the recent budget actions by the U.S. Congress. "We now have nine states designated by Congress to participate in the height modernization program, and we hope that soon there will be a recognition of moving toward a national program."

A report has been drafted on a potential national strategy for height modernization, and Challstrom and his staff are anxious to share that information with all stakeholders. The height mod

Charles W. Challstrom
Director, NOAA/NGS

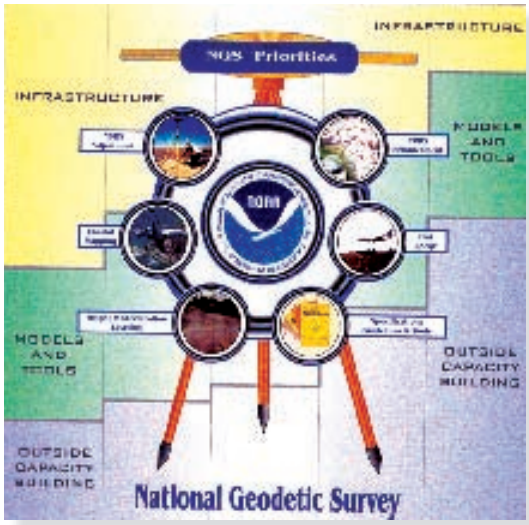
## NGS CONVOCATION 2004
## A view over the horizon

Juliana Blackwell, Height
Modernization Program Manager



Maralyn Vorhauer,
Observations and Analysis

Ed Carlson
Hawaii Geodetic Advisor




program has been immensely successful in all the pilot areas—"everywhere it goes, it garners more interest and more support for efficient surveying for all layers of government and, ultimately, for the private sector."

Another area that received considerable attention and should prove to be of interest to the surveying community was the possible expansion of NGS' OPUS software package to provide an online processing service for CORS users. The objective, ultimately, is to develop a capability of capturing updated GPS surveys, processing them by OPUS-like software, and incorporating the data into NGS' integrated surveying database.

My thought, when I heard this, was: Is this an alternative to the blue booking process? Challstrom thinks that the answer would be, yes, since the idea behind the OPUS-like data processing service is to create an effective process for capturing GPS data. Prototypes of the new service are expected to be evaluated within a few months.

Other developments that lie ahead for NGS became obvious from the presentations of several invited speakers. "This time," Challstrom said, "we had a number of very good people who came to share their ideas on some aspects of our priorities. Peter Lazio, for instance, gave immensely helpful feedback and many useful suggestions on OPUS. Robert Young was here to talk about the value of the spatial reference system and the geodetic control for his work. He was so enthused by the topic, and so enthusiastic in his manner of delivery, that we started referring to him as Rev. Robert Young. He did preach at us very effectively and, we were delighted to see his enthusiasm and hear his praise about the value of our work to his business. He inspired many of us to feel even better about our work at NGS."

Two other presentations—this time from within NOAA—were perceived as crucial for what lies ahead for NGS. One was given by Captain Roger Parsons, Director of the Office of Coast Service, and the other by Dr. Rick Spinrad, Assistant Administrator for Oceans and Coastal Zone Management.

Captain Parsons emphasized the importance of NGS' updated positioning capability for shoreline mapping and, consequently, the preparation of nautical charts so vital for all

the Nation's nautical operations. "His views were particularly valuable in that they re-iterated the feelings we share at NGS that even though the two services are no longer in the same office, we continue to work together on a daily basis in meeting the high demand for more accurate digital data for shoreline mapping," Challstrom remarked.

Dr. Spinrad's presentation brought a similar re-inforcement of the critical part NGS' survey control, positioning, and mapping play in integrated observations of the Nation's ocean waterways. "His was a look at how we can all share data and processes so that our observations meet a multitude of needs. We're within NGS and the National Ocean Services, focusing on providing global leadership on technology in our field, on observation systems, modeling, and delivery of information to the public. In that respect Rick Spinrad's presentation set the tone for areas that NGS needs to focus on to serve the broader coastal and ocean community.

The demands on our Nation's transportation system, be it naval or road or air, for accurate surveys is such that NGS is also planning to work much closer with the Federal Aviation Administration. The issue here, from Challstrom's point of view, is not accuracy—they do that quite well—but how to leverage NGS' abilities with those of others and assist FAA with contracting the work so that the surveys done for FAA all lead to safer approach routes for landing and, consequently, safer air transportation. This, in Challstrom's opinion, is a development of potentially immense importance for the surveying community, and he is eager that the surveyors represented in ACSM take advantage of this tremendous opportunity.

Not only the future of NGS' science was subjected to scrutiny at the 2004 convocation; workforce issues loomed large as well. "We were reminded quite forcefully," said Challstrom, "that people are the key element for our future success. We need to place greater emphasis on maintaining core capabilities—and that means retraining people whom we now have for new responsibilities and also preparing, in an orderly way, to replace those who have recently retired or are nearing their retirement age. We've seen quite a number of our seasoned experts walking out the door, and the percentage is growing larger. We must take action to replace them with people with expertise matching our changing requirements."

The National Geodetic Survey employed a unique method in the past to build its workforce; to quote an expert old enough to remember, "We used to grab them—math and science whiz kids—straight off the street." This is no longer possible, for various reasons, but NGS is once again becoming more aggressive about its workforce development issues.

"People are the key to the future success of the National Geodetic Survey," Challstrom concluded, "and the convocation gave us an opportunity to bring this fact to the fore."

Chris Parrish, Remote Sensing

## NGS CONVOCATION 2004
## A view over the horizon


Rick Spinrad, Assistant Administrators for Ocean Services

# "How we see NGS evolving"

## — a question in the minds of all NOAA/NGS stakeholders

Mader introducing Peter Lazio

*Gery Mader, the organizing power figure behind NGS' 2004 convocation, thought he would have to twist quite a few arms to pull together a successful program. But, things turned out quite differently. The crew that would much rather occupy a station for hours on end than be subjected to death by PowerPoint, pulled it off admirably. The focus themes—six for each of NGS' six priorities—were each well represented, the [PowerPoint] presentations were superb, and the presenters were very enthusiastic about what they had to say—perhaps they pictured themselves talking to the stars. As many as 22 poster presentations were submitted—one of the new things tried this year to give everyone an opportunity to present their story. And the attendance in the auditorium was magnificent—200 on the first day, among them not less than 25 State Advisors, at least two scores of field personnel from Norfolk, Virginia, and a group of users from the private sector.*

*Mader's convocation wrap-up?—"It went very well, very well indeed. Everybody was enthusiastic…I believe it was the first time I have heard people say, 'Hey, let's do this again, soon.'"*

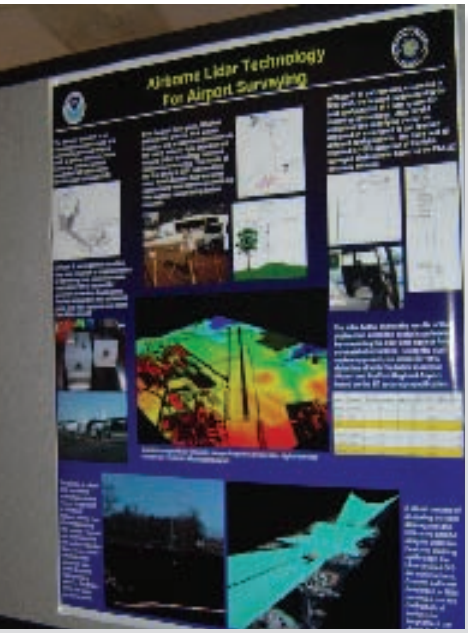
"Prior to the convocation, we had done a lot of self-examination about where we are going in the future," Mader said by way of explaining the theme of the convocation. "We had come up with new plans, identified new directions and new emphases, assigned new priorities—all this under the catch-all title of 'What lies ahead.' But all this strategizing was done here at HQ, and we wanted our colleagues from the field to have a say too. Besides, going over our future once again could only be to everybody's benefit."

Interactiveness—wihin and among federal agencies—is the direction everybody's moving in. NOAA's National Geodetic Survey went a step further during the convocation by listening and learning from users. And what better program to demonstrate this than OPUS—the online positioning user service created by NGS about three years ago.

Mader, who as Chief of the Advanced Technology Branch and its Geoscience Lab runs OPUS, invited Peter Lazio, a survey company owner up in Long Island, and a very enthusiastic and prolific user of OPUS, to come and talk about how he uses the service. And he did just that "He got everyone fired up," said Mader with great admiration for the surveyor-gentleman.

"We could see how OPUS is being used in the field, he made some suggestions for improvement, and he showed us how, since we did not exactly do what he had wanted, he went ahead and created a modification by himself that enables him to do network adjustments. And, the results were very intriquiging! Peter demonstrated that one can successfully include the co-variances we provide—the G-file—in another network adjustment, and things work just fine." This requires some extra effort on the part of the user, but, "it was great to see him doing it and the math working well—it definately improved his results. Whenever it makes sense to include several OPUS positions in his adjustments, Lazio does it, and for

?????




Mader it was "so refreshing to see somebody not only using OPUS, but taking it a step further."

The next round of crucial changes for OPUS, in Mader's opinion, is the transformation, now feverishly worked on, of the one-file-at-a-time service into a service with an option to submit and process projects. "Users will be able to submit projects that may extend over several days or weeks, with any number of stations occupied on a particular day, and OPUS will process that as a network," Mader reported at the convocation.

Another revolutionary change, studied by a team of experts within NGS, concerns how best to publish OPUS results in NGS' database. "Right now," Mader explains, "getting solutions published in our database requires going through the blue book—a labor-intesive, detailed process few really care about. It just does not encourage people to publish. In contrast, we found that most of the meta data pertaining to a solution that we want to archive are already present in OPUS." The team developed rules of publication, and the expectation is that in the next few months, the Geosciences Lab will begin accepting OPUS results for publication.

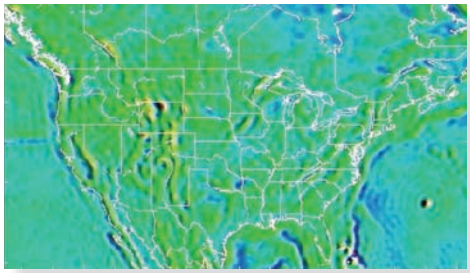

?????

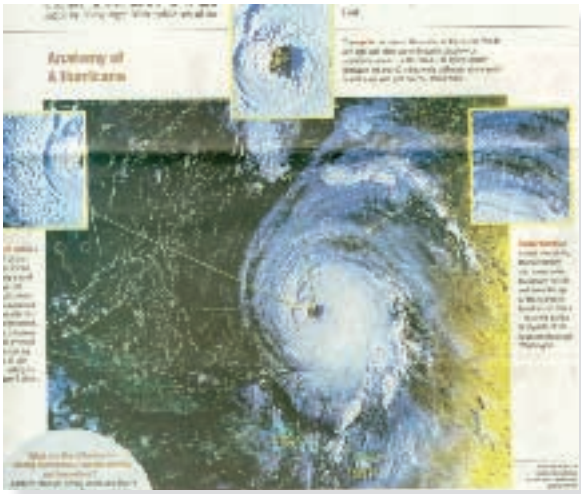
"We expect to do about 100,000 OPUS solutions in the coming year," said Mader, "which is why we are so anxious to streamline the process by which one can go into the database." In the final analysis, this improvement will empower surveyors at the local level to set their own control, publish in the national spatial reference system, and enable other users benefit from their solutions. The format will be streamlined, so the control set by local surveyors will have the same quality, same merit as if set by NGS.


Mader thinks and breathes OPUS—at least when he is behind his desk—but as the Geosciences Lab Chief he monitors research on other productivity improving areas. One of them has to do with perfecting NGS' modeling capabilities so that surveyors can begin to use single-frequency receivers.

"Two research efforts have recently been completed that are likely to improve the computation of an accurate ionosphere map from CORS data. As far as I know," says Mader, "no one else has as yet attempted this." The advantage of using CORS for ionosphere

"How we see NGS evolving"






modeling is that the close proximity of the stations yields spatial and temporal data of high resolution. The million dollar question, of course is, why would geodetists want to model the ionosphere?

"We need to do that," says Mader, "because if we know what the ionosphere is doing, then we can very quickly determine those energy inter-phase ambiguities, and, immediately leap down to centimeter-level accuracies in positioning capability with GPS." So, modeling the ionosphere helps geodesy, by supporting real kinematic-type efforts, plus, it's of interest to ionosphere researchers in its own right. The reseach was presented but did not receive much treatment at the convocation, simply because it's going well and it's such a specialized area.

Similarly with the geoid. We do good work on the geoid, and it's not controversial. However, given that height modernization has been and remains such a big theme, everybody understands the need for improving the geoid as much as possible. In fact, to go back to OPUS, one of the reasons for pushing for the publication of OPUS solutions is the fact that NGS has few GPS positions on benchmarks. Having those benchmark positions would be a great asset for accurate geoid computations. Mader says they want to ask local surveyors working near a benchmark, if they could set up on it for an hour or two, submit the data to OPUS, and run the solution in the database.

Some consider getting rid of the level rod and being able to survey benchmarks by GPS to be the two most important contributions that NGS can make to improving surveying efficiency. Mader agrees. "As pleased as we are at how OPUS has been received, people always expect more." NGS recommends occupying a site for at lest two hours to obtain quality results. "People like that, but the next question is, why two hours? Why can't I stay ten minutes and be done?" The research on the ionosphere, done under contract with Ohio State, may get us down to the 10-15 minute submittal and also lead to a wider use of single-frequency receivers.

And, at the hub of all this is OPUS. It seems that other areas that NGS has developed a good track record now have an opportunity to become even better with OPUS. Mader thinks that OPUS is a perfect example of how practitioners out there can become the doers, while NGS maintains the expertise to create better tools and moves into the role of the teacher. The days are gone for government

agencies such as NOAA/NGS to dictate "the control is going to be here, and you don't do it until we come to town." It's the users who need to determine what needs to be done, and that's why there is such an emphasis at NGS on developing efficient web-based services.

Dr. Gerald Mader, a scientist and a teacher at heart, is a perfect example of the type of employee NGS will need to fulfil its vision for the future. But, the vision is another story, to be told by one of its principal creators, Dave Zilkoski.

Dave Zilkoski, Deputy Director of NOAA/NGS and currently on special assignment as Acting Technical Director, NOS

## Defining a vision

"The strongest impression I carried away from the convocation was that people really felt empowered to influence what NGS will be doing in five to ten years," said Dave Zilkoski, Deputy Director of NOAA/NGS. We had almost all of the NGS employees attending the presentations and workshops, and much of the discussion within our six program priorities honed in on what we are really going to focus on—where our strengths are, where we need to work with others, and what we should leave to others to do. Zilkoski expects program managers to select, based on input from the convocation, three program leads that will set the stage for NOAA/NGS in the years to come.

Any successful program needs a long-term vision and a strategy of accomplishing that vision. NOAA/NGS envisions itself moving away from being the doer to becoming a teacher. The strategy by which this change can be accomplished requires, among other things, that managers are leaders, and that employees feel empowered to hold themselves, as well as the mangers, accountable to the vision that they had signed on.

Zilkoski led a panel discussion at the convocation about the changes being put in place to improve leadership throughout NGS. The formal process of defining the vision started about a year ago, but the actual starting point was in 2000. "We knew," said Zilkoski, "that we would have potentially less people, and we knew that we needed to preserve our core capabilities at a time when people were leaving the organization and we were not able to replace them as fast as we would have liked to. So, we developed an outsourcing plan."

About a year ago Zilkoski met with every division in NGS as a whole, explaining what he perceives NGS

**Vision of NGS in 2010**

Everyone can know where he or she is and where other things are... anytime, anyplace.

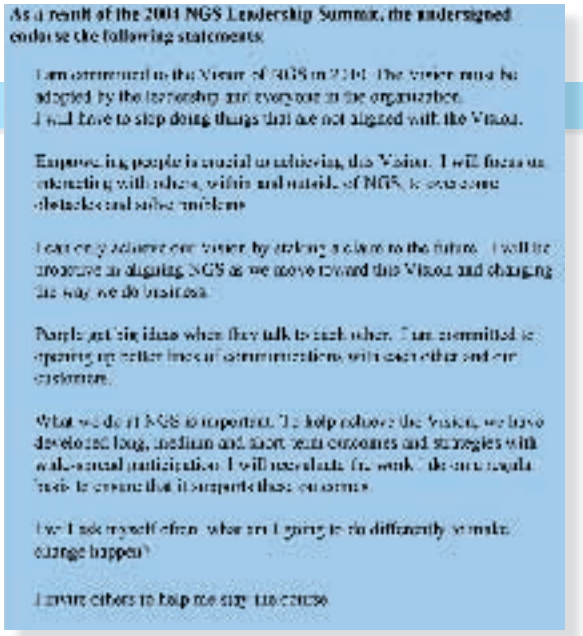
Everyone will have a role in maintaining and evolving the National Spatial Reference System.

Everyone will have a role in developing specifications, guidelines, tools and models.

Everyone will have a role in building outside capacity of a diverse group of users.

Everyone will support the NGS Priorities: Coastal Mapping, CORS Enhancement, FAA QA/QC, Height Modernization/Leveling, NSRS Adjustment, and Specifications, Guidelines and Tools.

*Zilkoski, Vision, from p. 41*


As a result of the 2004 NGS Leadership Summit, the undersigned endorse the following statements:

I am committed to the Vision of NGS in 2010. The vision must be adopted by the leadership and everyone in the organization. I will have to stop doing things that are not aligned with the Vision.

Empowering people is crucial to achieving the Vision. I will focus on interacting with others, within and outside of NGS, to overcome obstacles and solve problems.

I can only achieve our vision by taking a view to the future. I will be proactive in aligning NGS as we move toward the Vision and changing the way we do business.

People get big ideas when they talk to each other. I am committed to opening up better lines of communications with each other and our customers.

What we do at NGS is important. To help achieve the Vision, we have developed long, medium and short term outcomes and strategies with wide-ranging participation. I will reevaluate the work I do on a regular basis to ensure that it supports these outcomes.

I will ask myself often: what am I going to do differently to make change happen?

I invite others to help me stay the course.

A vision crafted at the Leadership Summit and presented to employees at the 2004 convocation.

will look like five years down the road. "We would be an elite set of people, doing special surveys, leading the way in standards and specs, and helping people understand what it means to position ourselves as leaders," Zilkoski said.

There were questions, comments, some scepticism, but, on the whole, people were ready to give it a shot. They wanted to know what they need to do to make it happen.

At about the same time, the NGS Executive Steering Committee started working with division and branch chiefs on the six program priorities. "We worked at this from the long-term, strategic perspective," said Zilkoski. The desired outcomes were one of the issues examined; how to measure outcomes, and what strategies are needed to achieve them were others.

The next step was the formation of focus groups. Everybody in NGS who wanted to come and talk about what NGS needs to do to make the vision happen, was invited. The views and opinions expressed in the focus groups were compiled for study by management. Finally, at a leadership summit held earlier in 2004, an agreed-upon vision was crafted. This vision was presented to all NOAA/NGS stakeholders at the convocation.

The NOAA/NGS vision for 2010 says "this is what we want, this is what we think we should do to achieve it, and, let's go and do it together." Implicit in these statements is a question that challenges each and every employee of NGS, irrespective of level. To Zilkoski, who believes in empowering people, that one most important question is: "What do **I** need to do differently to fulfil the NGS vision."

Being empowered means taking charge, being proactive, not waiting for somebody else to make a change first. It means that if employees perceive a change from the agreed upon vision, they have an obligation to point out and question the change.

Listerning to a presenter... the skill of listening is one skill that a national organization with quite a bit of implementation at the local level has to hone to perfection, and fast

Zilkoski sold the ideas of a vision and priorities to management and employees alike by encouraging everybody in NGS to get involved in the process. It seems to have paid off. During my recent visit at NGS, I saw a big poster of the vision signed by division and branch chiefs and other managers. Each of the managers I talked to saw a need for a vision and approved of the strategic precepts outlined, even though they sometimes held different views on how NGS may get there, especially in terms of personnel.

And that ties in with my earlier question, What sent NGS on the search for a vision?

"I have always believed in empowering people," said Zilkoski. "One particular situation—and we have found ourselves in that situation—when employee empowerement is crucial is when your workforce is shrinking. We are shrinking so fast that while trying to meet expectations, we got ourselves in that rut of being hard-core managers, often wearing more than one hat, and forgot to be leaders. And the employees saw that, and their morale was decreasing."

The National Geodetic Survey had 225 employees in 2004, fifty less than in 1996, and they have been holding steady at the 225 level for the past two years. As people retired or moved on, not enough attention was paid to replace these highly qualified individuals with the same caliber of people.

Faced with a critical workforce situation, the director and the deputy came to the same conclusion: "we have to reach out and get back to leading and empowering people."

It takes a special kind of trust to go forward with a vision which so unequivocally puts power in the hands of employees. But then, the National Geodetic Survey has almost two centuries of history working in a position of trust, and the people who have staffed it have always been exceptionally committed to the trust our Nation has

Renee Shields, Geodetic Services

The best teachers are those who constantly seek to improve on their core capabilities...

placed in their surveying, positioning, and mapping work.

A strategy of looking at the bigger picture and listening to users seems to be the way forward for a national organization such as NGS—an organization with priorities that call for a special type of workforce: innovators, teachers, and leaders.

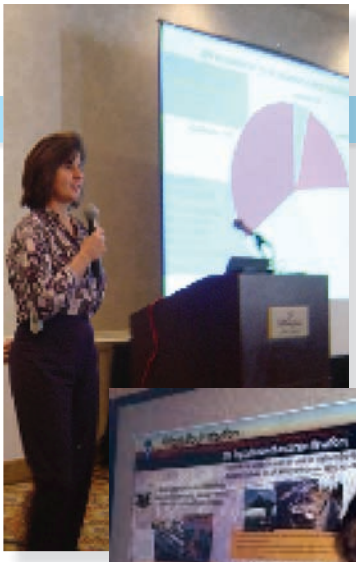
Enjoying a pre-Christmas potluck lunch...

"People are the key to our success"

Not an earth-shattering conclusion, and certainly NGS is not the only employer to have arrived at it recently. Yet, the statement does not sound hollow coming from an NGS employee...perhaps I am biased—I have been around surveyors and mappers for too long not to appreciate the candidness this particular profession exhibits. I heard, during a Christmas party I was so gratiously invited to, some criticisms and I heard a genuine belief that NGS is on the right track. Here are snippets from those conversations...

GIS, a new area for NGS. Employees need to be educated about what GIS is and how traditional NGS activities can be integrated with or complement GIS.

**Dave Doyle, Chief Geodetic Surveyor**—We are not hiring people with the right type of academic and practical background. In the seventies, we used to "shanghai" math and physics grads...we got the best as soon as they graduated. Some time between 1983 and 1988, we stopped looking for new people with special talents, and our pool of core skills started dwindling down. Those grayheads you see at this party are the "end of a breed." Yet, to train others, one needs to be extremely knowledgeable, to have those special talents, and not only in the research fields... The general factor is that workforce in government is shrinking in general; we're expected to do more outreach, but our leaders don't seem to realize that outreach requires a totally different set of skills—an extroverted scientist who knows his stuff and knows how to talk to people about it. Having your own crew collect data and asking a state agency to do it for you is not the same thing. Besides, it takes time to train a young person straight from college to do outreach, not to mention the fact that not everybody is suited to this type of work.



**Juliana Blackwell, Height Modernization Program Manager—** The young marine crew who joined NGS in 1992 today leads one of NGS' top priority programs. The poised young woman understands and agrees with the need for NGS to step back and let the doers at the local level take charge. She believes in listening to the outside world, learning from it, and repositioning NGS into an organization capable of keeping abreast of change.

"It hasn't been until the last couple of years," Blackwell remarked, "when there was much discontent with what's going to happen with NGS—lack of legacy, people concerned that when they retire their work will not be carried on—that NGS leaders finally decided to 'do something concrete about it.' At first, people thought, 'Oh, yes, sure...a vision's not gonna cut it...' but, I do think that the idea has caught hold."

Information sharing among NGS employees has improved, and NGS is trying to get more feedback from the users of their data. "We lost track of that for a while, because maybe we're too content with what we're doing," said Blackwell. But then GPS happened, and CORS, and demand for a common reference and uniform standards exploded so quickly that NGS could hardly cope, let alone think of how they fit into this new technological revolution.

Blackwell views creating priorities for NGS as the right step toward focusing the organization's resources and efforts. Her colleagues in the field, as well as the research and outreach personnel with whom she works, all feel quite positive about the way NGS wants to go forward. "People want to belong to something important—a vital project, a strong organization—and we've realized that if we waited for others to tell us what to do, not much would happen; but, if we work together, we'll be able to come up with creative solutions to common problems."

People are "screaming" for information and leadership from NGS on real-time GPS, guidelines on how to do height modernization...besides, technology is not going to stop evolving! NGS has to keep ahead of the curve.

Personnel issues have been and continue to be at the heart of changes at NGS. New orientation requires may require a different set of core skills, something that Blackwell thinks some of the new people coming aboard—the PMFs, or Presidential Management Fellows bring into the mix. "They think a little bit differently from the typical geodetic surveyor, and their viewpoints give new life to what we're here to do," contends Blackwell. NGS will always need geodesists, hard-core scientists to develop new technology, new and better standards and models...the technical base, but having people with a non-geodedic background helps too—especially now that the pressure is on us to get out there, see what people want from NGS, and market the products and services that we have developed for use at the local level."

Galen Scott

Blackwell understands that it may be hard for some people to appreciate, initially, some of the good qualities that PMFs bring into the NGS mix. Such as being quick responders, and looking at the bigger picture, and being more interested in such developments as GIS, and working with the GIS community, and in environmental protection and restoration.

"They are younger than we are," says Blackwell, "and because they have been taught to blend skills, they are in some ways more experi-

Juliana Blackwell and FEMA's Paul Rooney, discussing a point of interest

Joe Evjen, talking about a different kind of outreach at the 2004 NGS convocation

enced in how to get things done in teams." Blackwell doesn't hold much for the "stove-pipe mentality"—doing one's work over and over again with total disregard for what's happening next door.

However, people are getting together more often now and brainstorming, which is why the 2004 convocation was so successful. "We were excited to have the outside world come and tell us how they're using our products and what they would like to get from us. It really made all the difference. Organizing the convocation by priorities and not by divisions made a big difference too.This kind of "blending" of views never fails to motivate people to do more and better."

The old "stale" ways of doing business are gradually being shown out the door at NGS. Blackwell, whose job it is to encourage the "blending" of work of as many different groups—geodesists, GIS experts, FEMA personnel, state agencies, private business surveyors, and even the IRS [in one state]—as needed to get the best height mod solution for local implementation couldn't approve more.

**Joe Evjen, Geodesist and Teamleader for Guidelines, Specifications, and Tools—**"For NGS to be a subject matter leader in surveying that's becoming more cutting edge, more fast paced, and more technology driven, a number of things need to happen," said Evjen. First on his list is communication; a close second is better connection between science and outreach.

"We have got to do a better job of getting ahead with our website, so that it's easier and simpler to find information from NGS," said Evjen. He did some calculations after the convocation and found that NGS delivers a whopping 1.4 million data products a year via the web, based only on the statistics provided by Charlie Schwartz of the Systems Development Division.

If they were to accomplish this feat the old-fashioned way—by using a phone information bank utilizing CD-Rom and Technical Memoranda—all 225 employees of NGS would have to pick the phones every thirty seconds, all day long, every day in a week. Not a very efficient way of providing information.

Banner from th
www.ngs

With the website, which Evjen likens to a "Victory garden," a bit roughshot, not one of those ornamental Japanese gardens, they can do this in their sleep. They will be able to get even more data out the door with the NGS tool kit and data services increasingly being made available through automated data sheets and, recently also shape files.

Evjen wants the NGS website to take a heavy load off the employees in information sharing, but he does not minimize the importance of taking a "product on the road, and telling folks what's it all about." But he does think that the synergy between workshops and the website—historically rather weak—needs to be strengthened.

The web is an extremely effective tool for reaching out to anybody who is ready to be reached. "Right now, when we get one good idea, we go out on the road with it solo," said Evjen. "We'll get out our message out more effectively if we're part of a more cohesive package of services and our message is cleaner."

Evjen thinks that NGS' outreach needs re-thinking. "That's almost part of the cultural problem at NGS right now," he said. "Instead of buying a box of chocolates or key chains and handing them out at conventions—at ACSM's, for instance—we need to think of other ways of engaging our clients."

The legacy issue that's coming up is, according to Evjen, another interesting challenge that NGS is facing right now. "The NAD83 folks are retiring all almost at the same time, and we do need to keep our eye on the ball with this," Evjen stressed. "It's distracting when you have one person working on a project and then he or she leaves and everything comes to a standstill."

The organization realizes that they have a hole to patch, hence the goals to get it to 2010, but, "in the meantime, when we lose a web master, or a gravity person, or a triangulation expert, the continuity has been lost." Evjen is not alone to point out that they are stretched rather thin, and that the danger of getting caught up in a pond of "little matters" grows exponentially when this happens.

He also considers a distraction what's internally widely known as "feeding the beast." He maintains that NGS is unique within NOAA in that it has a fairly solid mission that the employees understand well. The current policy to keep scientists "on task" to produce measurable goals is a sign of the times, but "we do have a distinct product, which should not be lost sight of in the meantime."

Personnel and staffing keep cropping up as a challenge no matter what the topic of discussion is at NGS. "What we're finding," Evjen comments, "is that it's very rare to come across what we need most, and that's an "extroverted geodesist"! For the uninitiated, that's a person who understands the science and is a virtuoso in communicating it to the general public.

To attract more of these extroverted geodesists, Evjen recommends that NGS engages the universities more than it's been the case so far. Rather than waiting to grab people as opportunities arose through projects or programs, or relying on "cool" science pictures to pique a young grad's curiousity [as was the case with Evjen], NGS should take some of its projects to the universities, get the science done, get a few academic papers written up, and, most important, get a trained grad.

Without this kind of a "breeding ground," and without the world-class leveling and triangulation parties that NGS used to have in the past, "it's hard to know where the next generation is going to get its teeth cut."

"The old approach worked for me," laughed Evjen, "I got on top of the Washington monument and got mudied in restoration waters," but the future definitely lies in universities and at such regional undertakings as the Spatial Reference Center recently established in California.

At first, Evjen was rather skeptical about the center; he thought it a duplicaiton of efforts, but in hindsight, he is

he NGS website,
.noaa.gov

Evjen, from p. 47

happy to see it become a craddle of new ideas, turning what makes sense at the national level into a useful product at the regional level.

And that just proves the old adage: one answer isn't always the right answer to all. Certainly, this holds true at NGS, which is trying to find the answer that's right for a national organization with a national mandate whose implementation is increasingly becoming local.





SERDP

## DEPARTMENT OF DEFENSE FUNDING AVAILABLE FOR ENVIRONMENTAL RESEARCH AND DEVELOPMENT: UNEXPLODED ORDNANCE

The Department of Defense, through the Strategic Environmental Research and Development Program (SERDP), will be funding Unexploded Ordnance environmental research and development. The objective of this effort is to identify, develop, and transition environmental technologies that relate directly to defense mission accomplishment. SERDP intends to fund four projects within the Unexploded Ordnance core thrust area in the following work:

- Development of innovative signal processing: exploitation of geophysical data collected at the UXO standardized test sites
- Sensor phenomenology of UXO in underwater environments
- Innovative technology for wide area assessment of sites potentially contaminated with UXO
- Development of handheld and man-portable platforms supporting geophysical surveys of UXO contaminated sites

Projects will be selected through a competitive selection process.

**PRE-PROPOSALS FOR THE NON-FEDERAL SECTOR ARE DUE BY THURSDAY, JANUARY 06, 2005. PROPOSALS FOR THE FEDERAL SECTOR ARE DUE BY THURSDAY, MARCH 10, 2005.**

Detailed instructions for federal and private sector proposers are available on the SERDP web site: www.serdp.org/funding/funding.html.